

Antenna

YE0011BA Datasheet

Antenna Services

Version: 1.1

Date: 2022-09-09

Status: Released



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About the Document

Revision History

Version	Date	Author	Note
-	2022-06-08	Ezail TAN	Creation of the document
1.0	2022-06-29	Ezail TAN	First official release
1.1	2022-09-09	Ezail TAN	Update test data

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1 Product Description

This Quectel external 4G antenna covers main 4G LTE bands and is compatible with 3G/2G/LPWA bands as well. The external antenna is barely influenced by the internal environment of devices, giving a much better performance in efficiency, radiation and gain whilst providing an optimized solution for a customer product. Quectel also offers flexible installation with custom cable length and connector options.

2 Product Features

- Cellular LTE
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	820–960 MHz; 1710–2690 MHz
Input Impedence	50 Ω
VSWR	≤ 5.97
Gain	≤ 2.56 dBi
Polarization Type	Linear

Detailed Passive Electrical Specifications

Frequency Range (MHz)	698–960	1176–1280	1400–1610	1710–2170	2170–2690	3300–4000	4000–5000	5000–6000
VSWR (Max.)	3.32	-	-	5.49	5.97	-	-	-
Average Efficiency (%)	69.7	-	-	69.8	50.8	-	-	-
Max. Peak Gain (dBi)	1.7	-	-	2.56	0.57	-	-	-

Mechanical Specifications

Antenna Size (mm)	50 × 16.4
Casing	TPEE
Connector Type	SMA (Male pin with internal thread)
Working Temperature	-40 °C to +85 °C
Radome Color	Black
Mounting Type	Screw
IP Rating	IP55
Weight	Typ:6 g

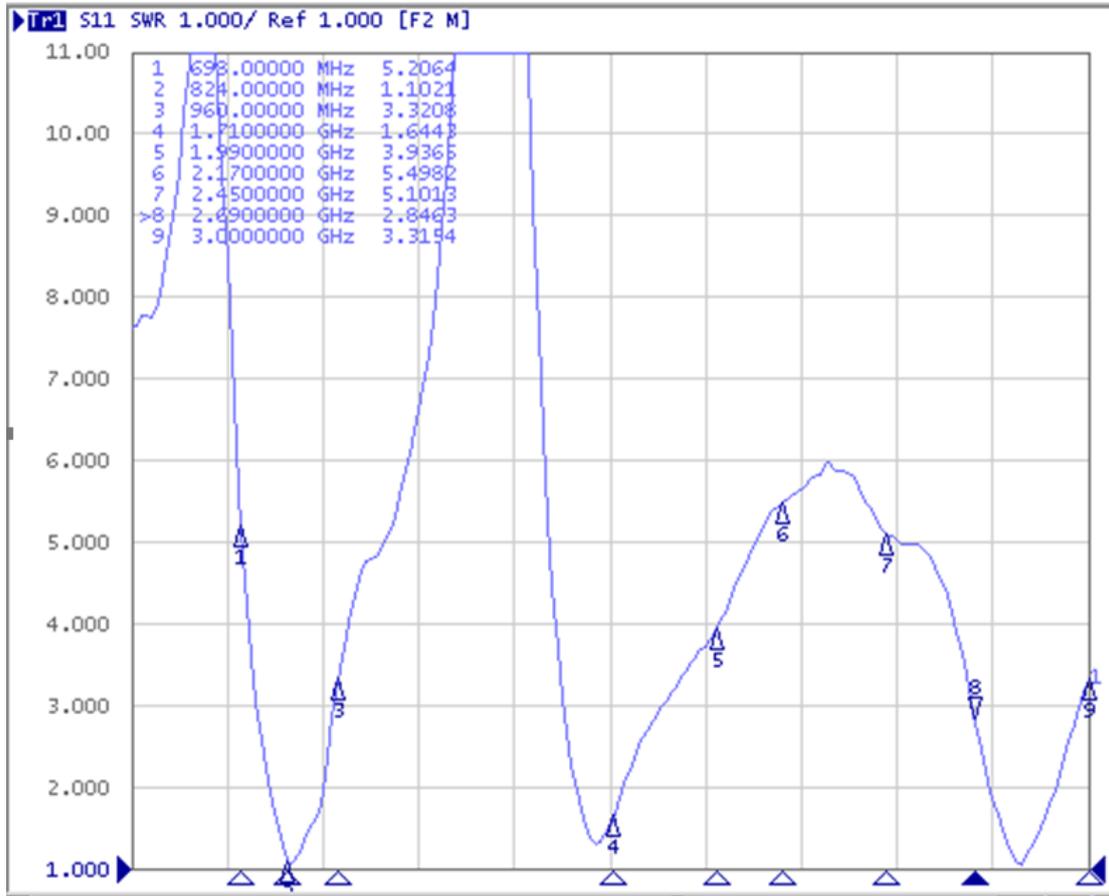
4 Overall Performance

4.1. Test Environment

- KEYSIGHT ENA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 600 MHz – 8.5 GHz

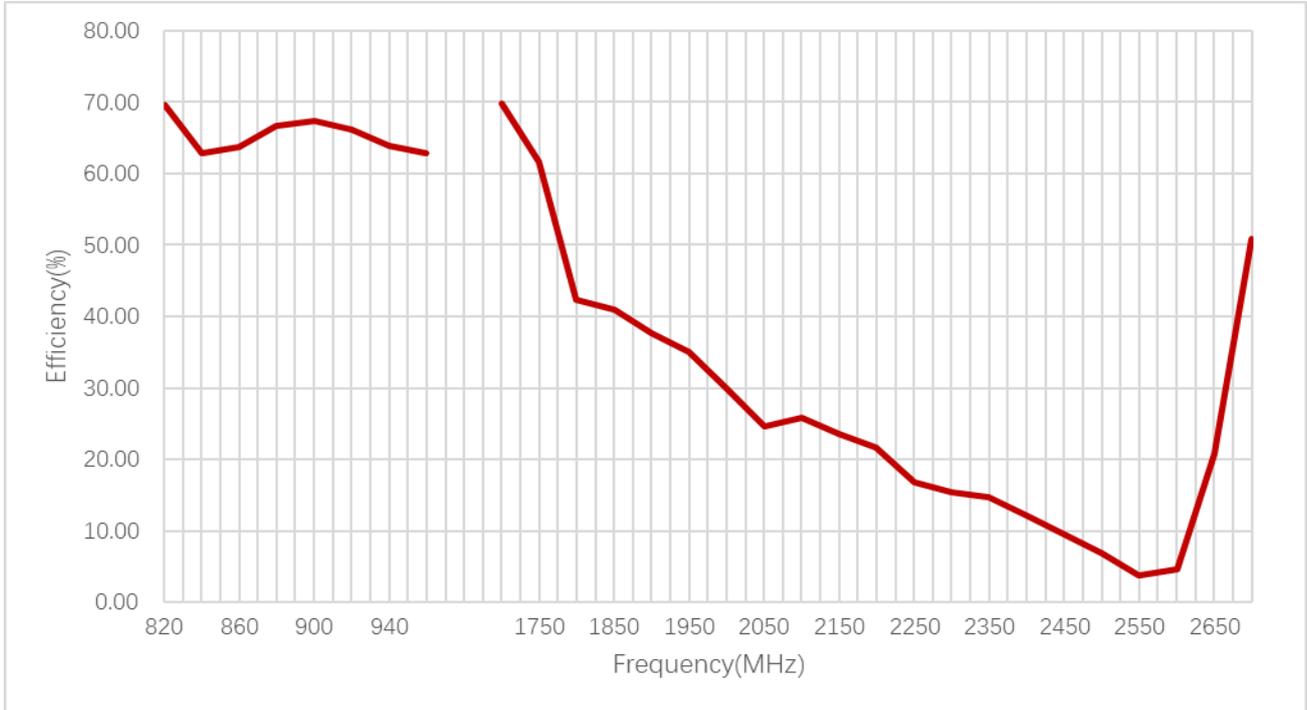


4.2. VSWR



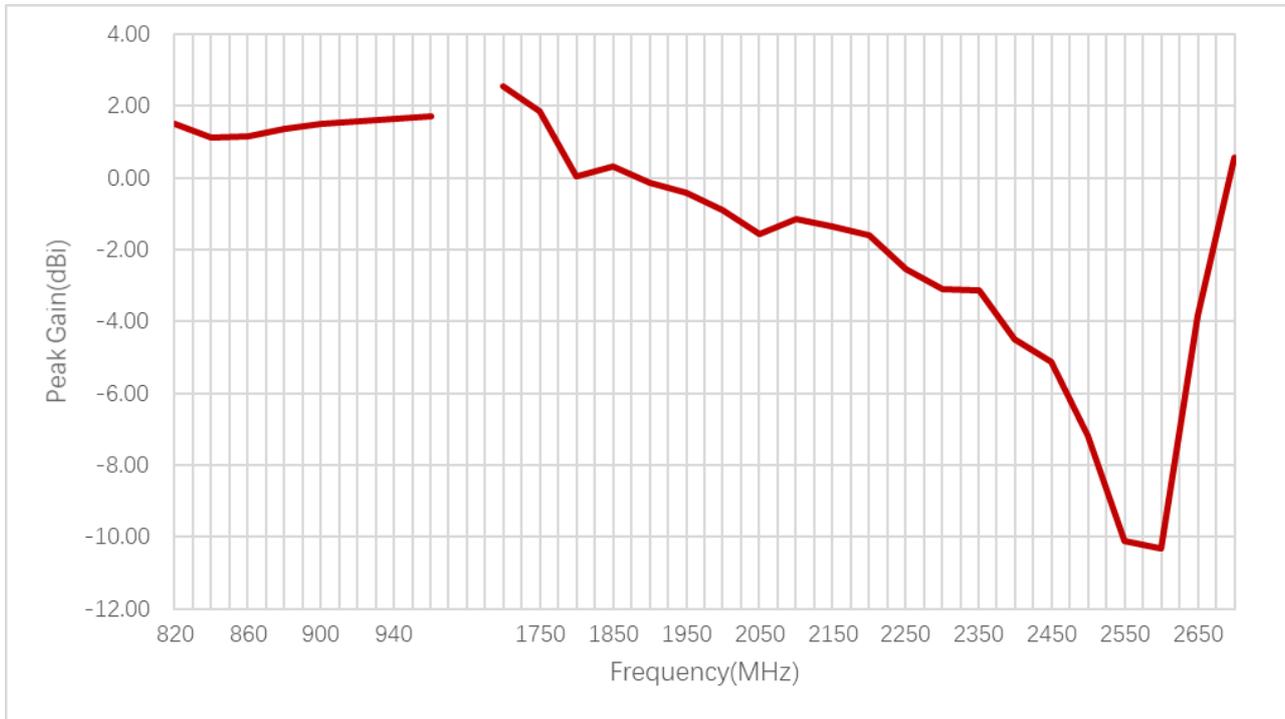
Frequency (MHz)	820	960	1700	1850	1950	2150	2300	2700
VSWR	1.1	3.32	1.62	2.83	3.61	5.43	5.92	2.79

4.3. Efficiency



Frequency (MHz)	820	960	1700	1850	1950	2150	2300	2700
Efficiency (%)	69.71	62.78	69.87	40.88	34.99	23.61	15.44	50.86

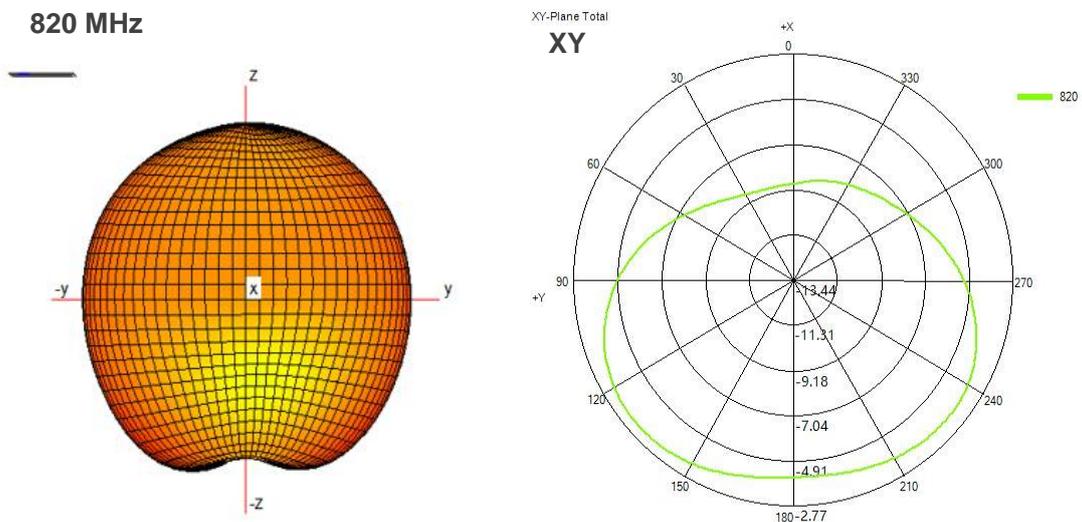
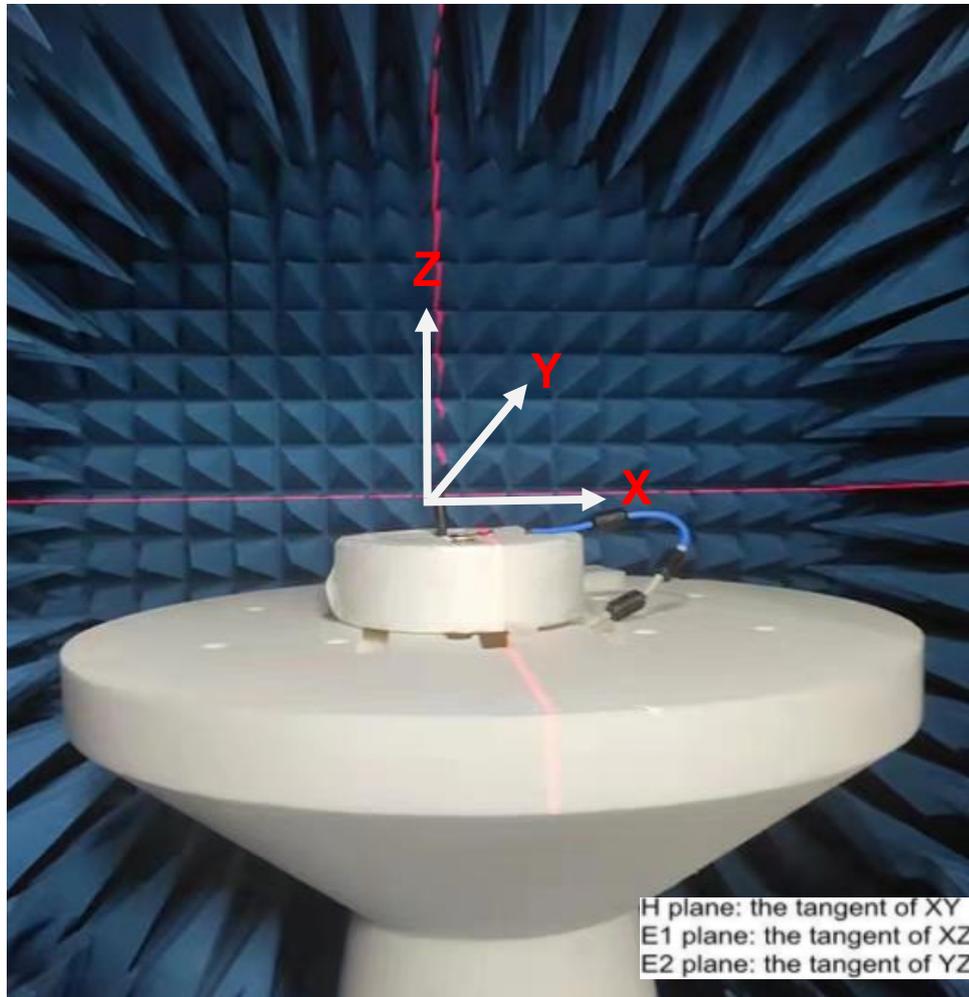
4.4. Gain

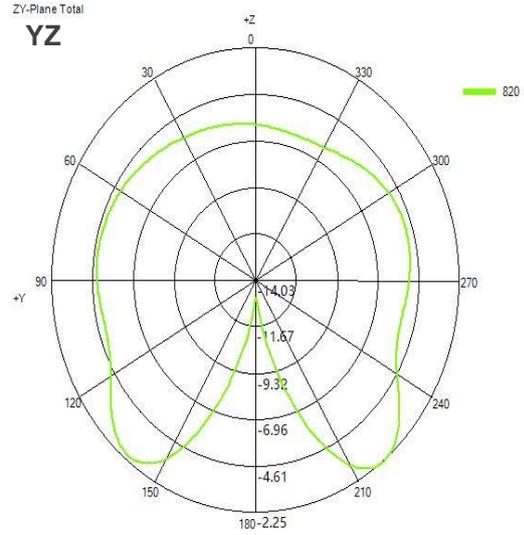
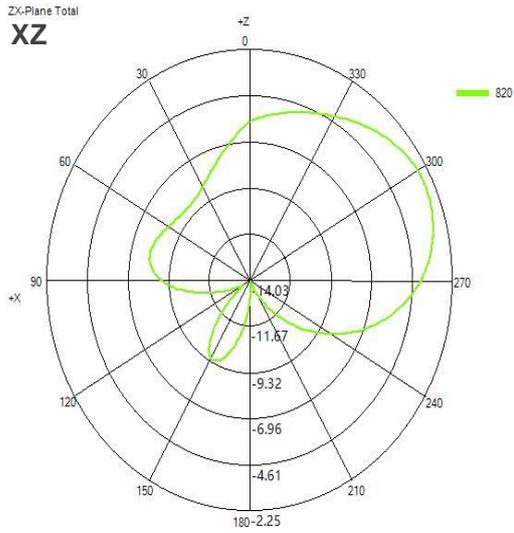


Frequency (MHz)	820	960	1700	1850	1950	2150	2300	2700
Gain (dBi)	1.5	1.7	2.56	0.3	-0.41	-1.35	-3.11	0.57

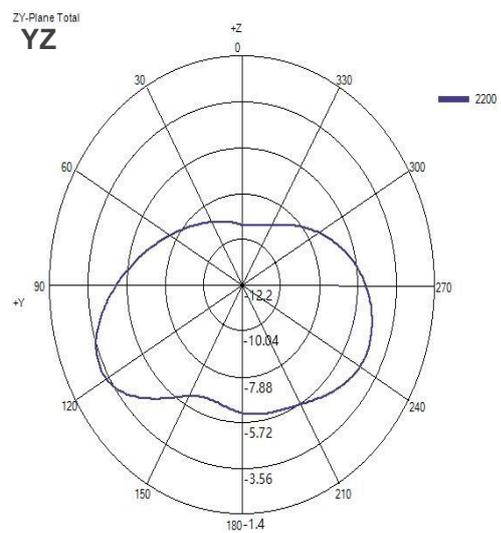
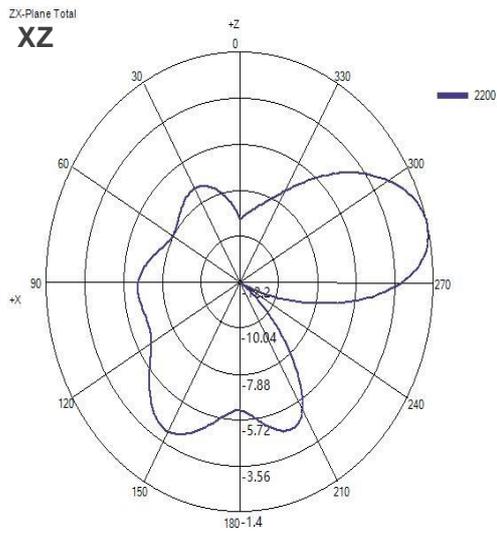
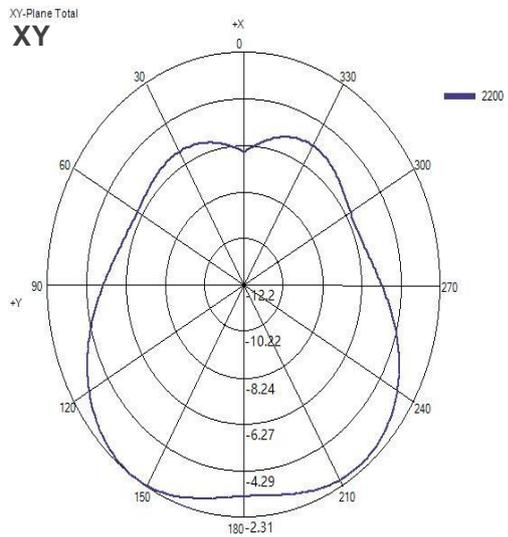
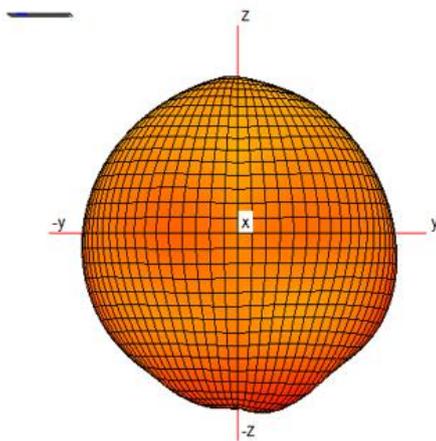
4.5. Radiation Pattern

- Test condition: free space



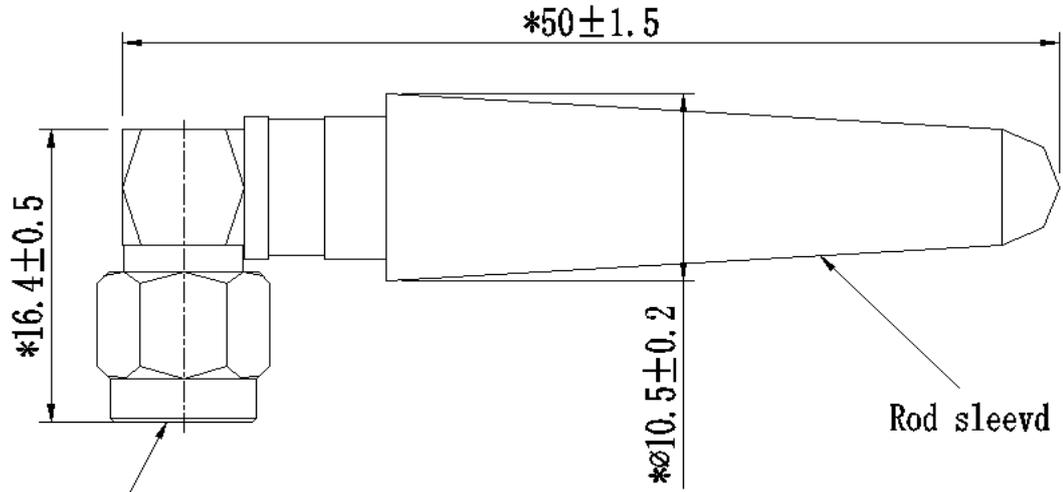


960 MHz



5 Product Size

ROHS



SMA/Au-PLATED (Male pin with internal thread)
Salt spray requirements: $\geq 48h$

